



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Memorandum

From: Larry Turner, Ph. D.
William Erickson, Ph. D.
Environmental Field Branch
Field and External Affairs Division

Two handwritten signatures are present. The first signature, "Larry Turner", is written in dark ink and is positioned above the second signature, "W. Erickson", which is also in dark ink.

To: Arthur-Jean Williams, Chief
Environmental Field Branch
Field and External Affairs Division

Subject: Effects Determination for Carbaryl for Pacific Anadromous Salmonids

We reviewed data and other information for carbaryl, a carbamate insecticide named by the Washington Toxics Coalition (WTC) and included in the court order for 'effects determinations' and potential consultation with the National Marine Fisheries Service. Carbaryl is registered nationally for use on a wide variety of agricultural crops; commercial turf and ornamental operations; homeowner applications to lawns, ornamentals, and gardens; and other uses. The Environmental Fate and Effects Division (EFED) has completed an environmental risk assessment for a Reregistration Eligibility Decision (RED) to be issued in June of 2003. The assessment concludes that levels of concern are exceeded for endangered freshwater fish and populations of aquatic invertebrates exposed to runoff and drift from agricultural treatment sites. We have adapted the more general findings of the EFED assessment to develop an analysis of the potential for effects on endangered and threatened Pacific salmon and steelhead Evolutionary Significant Units (ESUs) from current uses in California and the Pacific Northwest.

Based on the environmental risk assessment and additional considerations indicated in our analysis and other attached or referenced materials, we conclude that the use of carbaryl may affect 20 salmon and steelhead ESUs, may affect but is not likely to adversely affect two ESUs, and will have no effect on four ESUs. Our determinations are based on the known or potential

use of carbaryl on crops within habitats and migration corridors of each ESU, the acute risk of carbaryl to endangered fish, and the potential for indirect effects due to acute and chronic risks to their aquatic-invertebrate food supply. We don't have county-level usage data for homeowner and most noncrop uses, but we presume that they may contribute to the exposure and risks of these ESUs.

attachments